GRUMMAN plane news

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Elect Gavin Chairman of Grumman Aerospace; Towl, Schwendler relinquish duties in Aerospace

Keep posts in parent corporation

Clint Towl

Bill Schwendler

Joe Gavin

Following meetings of Boards of Directors of Grumman Corporation and two of its subsidiaries, Grumman Aerospace Corporation and Grumman Data Systems Corporation, on Thursday, April 19, several high-level changes in the management structure of the three corporations were announced.

Joe Gavin was named Chairman of the Board of Grumman Aerospace last week and retains his post as President of that Corporation.

At the same meeting, Clint Towl relinquished his role as Chairman of the Board and Chief Executive Officer of Grumman Aerospace, a position he had reassumed in July of 1972 because of the death of former Chairman Lew Evans. Towl continues as Chairman and Chief Executive Officer of Grumman Corporation, parent company of the Grumman family of firms.

Bill Schwendler, Chairman of the Executive Committee of Grumman Corporation and Senior Executive of Grumman Aerospace, also resigned his position in Grumman Aerospace.

Gavin had graduated from the Massachusetts Institute of Technology with a B. S. and M. S. in aeronautical engineering, and had served in the Navy from 1942 to 1946, before joining the Company as a design engineer on Grumman's first jet fighter, the XF9F-2.

He moved to Preliminary Design in 1948, and, two years later, became project engineer for the F9F-6. Then he took on a similar job on the F11F. He became chief experimental project engineer in 1956, and a year later was named chief missile and space engineer.

In 1962, Gavin was named a Vice President and director of the Lunar Excursion Module (later shortened to Lunar Module) program. He became director of Space Programs in 1968, and with the incorporation of Grumman Aerospace in May of 1969, he was elected as one of its directors.

Gavin was elevated to Senior Vice President in February, 1970. He was elected President of Grumman Aerospace in July of 1972.

Towl has dedicated some 43 years or more to the affairs of Grumman and was one of its founders. In fact, he has remarked with a smile that "I worked two weeks longer than anyone else, including Roy Grumman." He started December 15, 1929.

In the early days, everyone pitched in, doing anything that had to be done at the time. In time, as the Company became more stable, job tasks settled down and, in 1937, he was named Assistant Treasurer. He was elected Administrative Vice President in 1954. Six years later, he was chosen as President of Grumman Aeronautical Engineering Corporation, and in 1966 he became Chairman of the Board and Chief Executive Officer. It had been three years earlier that he had initiated the consolidation of all non-aerospace

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. . . and Viemeister, Nafis get new assignments

Pete Viemeister

Bob Nafis

Pete Viemeister has been appointed Vice President - Development by the Board of Directors of Grumman Corporation.

Viemeister has been closely associated with the Company since 1946, except for two years when he was self-employed as a marketing consultant.

A winner of a Grumman Engineering Scholarship, he was granted a degree in mechanical engineering by Rensselaer Polytechnic Institute in 1950. And in 1968 he won an Alfred P. Sloan Fellowship at the Massachusetts Institute of Technology and received a Masters degree in Scientific Management a year later.

His first job at Grumman in 1950 was as an engineer on the Rigel Missile Program. From '53 to '56 he worked in Preliminary Design, and in the Winter of '56-'57 he headed Presentations. Following two years of self-employment he rejoined Grumman in 1960 and was head of Business Development Planning for six years. He served as Assistant to the President of the Corporation and Secretary of its Executive Committee beginning in 1966 and until he entered M. I. T.

In 1969, Viemeister was elected President and a Director of Data Systems Corporation, a newly formed subsidiary. That corporation acquired Computility, Inc., in 1971, and Aero Data Inc. the following year. Viemeister was elected as Chairman of the Board of each of the two subsidiaries.

In his new responsibilities, Viemeister will work with each Grumman Corporation subsidiary to develop new products and expand current product lines.

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STUART, FLA.—It could be called a repeat performance . . . or, maybe, a homecoming. No matter what you call it, it was real. It happened a couple of months ago at the Grumman facility here when a very familiar looking plane appeared on the horizon near Plant 77, quickly settled into the landing pattern, and soon dropped onto the concrete runway at Stuart. And who should step out of the spunky G-44 Widgeon but another spunky veteran of Grumman—former test pilot Joey Gaeta, now retired.

The little two-engine amphibian brought back memories to a number of other veterans at Stuart—among them Walt Eichen, Art Melrose, Whitey Thuren, and Bill Bedell—who had been used to seeing the Widgeon flitting about Bethpage and Calverton while it was engaged as a "chase" plane in the Forties and Fifties. It was a little more than 20 years ago that the first Grumman contingent arrived at Stuart to conduct "winter" flight tests on a couple of the Grumman planes of that era. Gaeta was testing planes then, Melrose was a plane captain, and the late Roy Seligman was piloting "Queenie," the chase G-44.

This Grumman Widgeon, piloted by Gaeta and sporting newer, modified engines, was bound for Miami where it was to be delivered to Chalk Airways for inter-island transport. Who says you can't go home again?

'Hawkeye' squadron returns home

If you were away from home for 10 months there's no telling what kind of reception you'd get on your return. But when the men of Carrier Airborne Early Warning Squadron (VAW) 123 returned to the Naval Air Station at Norfolk aboard the USS Saratoga recently, they got hugs and kisses from their families and a welcome home party attended by Capt. Jack Eckstein, skipper of Carrier Airborne Early Warning Wing 12.

VAW 123, commanded by Cdr. J. D. Larison Jr., flew over 2,500 support combat hours during operations of the Saratoga in Southeast Asia. The "Screwtops" received numerous awards during their 10-month line period, including a Chief of Naval Operations Safety Award.

Gulfstream makes it a small world

Because of its old-world atmosphere, Savannah may seem to be off the beaten track. Perhaps it is. But there's an area on the north side of Travis Field, the municipal airport serving Savannah, where the Grumman American Gulfstream II production and service facility is located, where the "world" often passes in review.

One week last month, for example, a very definite international flavor was apparent. Aircraft at the service center for maintenance included Gulfstream IIs from widely separated parts of the world.

Among the visiting aircraft was one based in Singapore which was operated by a Chinese crew and registered in Indonesia. Another, an aircraft based and registered in Sabah, Malaysia, was operated by an American and Malaysian crew, while still another one was based and registered in Cameroon, Africa, and operated by a French Air Force crew. There was also a Candadian Gulfstream II that was operated formerly by an electronics firm in Holland, and also on hand was a crew from the Ivory Coast, Africa, who were about to take delivery of their Gulfstream jet. And to add to that international flavor, the Grumman American Gulfstream II "dropped in" to Savannah from a European trip.

The aircraft from Singapore had just returned from an around-the-world trip—and on board was John Parker, a Grumman American man based in Savannah. The Malaysian aircraft was to depart at the end of the week for a trip around-the-globe with Grumman American pilot Tom O'Brien and service rep Bob Romberg aboard, with a final touchdown scheduled two weeks later in Savannah.

And the conversations in the customer's lounge would make good copy for a world-wide traveler's guide. The foreign crews and the U.S. based crews (who have made many trips abroad) compare notes on service expected at various international airports, customs problems and solutions, hotel accommodations, and, of course, resaurants with the most interesting menus.

It all seems rather incongruous: an international flavor in this Spanish-moss laden city on the coastal plain of the Deep South. But considering how the range and speed of the Gulfstream II can shrink the world, perhaps anything's possible.

They're back at Whidbey . . .

Two Whidbey Island-based squadrons came home recently to end prolonged deployments in the Western Pacific. For skipper Cdr. Rosie Collins and the Scorpions of VAQ-132 it was only fitting that they were the first Grumman EA-6B Prowler squadron to return from sea duty—they were also the first to deploy last year aboard the carrier America.

And Cdr. Paul Barris, who heads Intruder squadron VA-115, brought his troops back home to Whidbey after an 11-month tour — and the crowd welcoming both the groups was a huge one, filled with relatives, friends, and well-wishers, among them Rear Adm. John Tierney.

. . . and 'Lizards' are on their way

There's plenty of grown men walking around with very unusual nicknames, so we're not gonna' ask how the "Green Lizards" of Attack Squadron (VA) 95 got their reptilian sobriquet. In any event, there's a new head lizard—Lizard 1, they call him—of the A-6 squadron that's due to deploy soon aboard the carrier Coral Sea.

Cdr. William (Zip) Zirbel will lead the "Green Lizards" on their first deployment flying Intruders with Air Wing 15 aboard the Coral Sea, with Cdr. Van Westfall his exec. "Zip" replaces Cdr. George Wales, who headed VA-95 while the squadron went through the hectic months of reorganization and training of personnel following its formation this past year.

As our old friend Little Orphan Annie used to say: "Leapin, Lizards!" And have a good deployment with the Intruder.

LM dedication. A model of the NASA/Grumman Lunar Module is on permanent display at the Alabama Space and Rocket Center. Attending the ceremonies at which Grumman Vice President Tom Kelly (R) presented the full-size model, were (L to R) Sen. Jack Giles, chairman, Alabama Space Science Exhibit Commission; Joe W. Davis, Mayor of Huntsville, Ala.; and Dr. Rocco A. Petrone, director, NASA Marshall Space Flight Center.

Towl, Schwendler keep posts in Grumman Corp.

(Continued from page 1)

activities at Grumman under a single corporate entity, Grumman Allied Industries, Inc.

When the Company was restructured in 1969, Towl was named Chairman of the Board and Chief Executive Officer of Grumman Corporation, the parent Company, and Grumman Aerospace Corporation, its subsidiary. Later, he was elected Chairman of the Board of two new subsidiaries—Grumman Data Systems in January of 1970 and Grumman Ecosystems in 1971.

It was in February, 1971, that Towl gave up the post of Chairman of the Board in Grumman Aerospace and was succeeded by Lew Evans. With Evans' death last July, he took up the chairmanship again.

Schwendler joined the Company in 1930 as chief engineer, a position he held until 1950. During that period, the Company produced some of its most noted aircraft—Wildcat, Hellcat, Avenger, Panther, and such commercial planes as the Gray Goose, Widgeon and Mallard.

He became a Director in 1939, a Vice President a year later, Executive Vice President in 1946, and Senior Vice President in 1956. He was appointed Chairman of the Executive Committee four years later. In 1961, he became Director of Grumman International, Inc., and in '62, he was named Director of Grumman Allied Industries, both subsidiaries of the parent Company.

Schwendler received his degree in mechanical engineering from New York University in 1924. A member of the Loening Aeronautical Engineering Corporation (as was true of all the founders of Grumman Aircraft except Towl), he rose to the positions of project engineer and assistant manager before joining the Grumman team.

Elect Nafis President of GDS

(Continued from page 1)

Bob Nafis has been elected President of Grumman Data Systems by the Board of GDS. He had been Vice President-Corporate Development for GDS.

Nafis, after winning a Grumman Engineering Scholarship, attended Cornell University and was granted a Bachelors degree in Electrical Engineering in 1949, after which he joined the Company. He worked on various aircraft programs—F-9F Panther and Cougar, F-10F Jaguar, F-11F Tiger, S-2F Tracker, WF Early Warning, E-2 Hawkeye, and on the A-6 and EA-6 Intruder — always moving to higher levels of responsibility.

In 1963, after experience in Advanced Systems and new business development, he became Chief Business Development Engineer. He won a Sloan Fellowship at M. I. T. and was granted a Master of Science degree in 1965.

Back at Grumman, he was named director of Anti-Submarine Warfare programs, and in 1968 he became F-14 Program manager. Two years later, he was elected Vice President in charge of Corporate Development in Grumman Data Systems.

Schedule spring flower show, May 10

On May 10th, the Grumman Garden Forum is presenting the first of three shows for 1973. The Spring Flower Show will be held in Plant 28 and is open to all Grumman employees and retirees.

The classes are as follows:

- Single tulip (stem length 12 in. or more)
- Parrot tulip
- Narcissus . . . including daffodils (stem length 8 in. or more)
- Single seasonal bloom (lilac or any flower in bloom)
- Tulip assortment (5 to 10 blooms)
- Seasonal assortment (5 to 10 blooms)
- Novice class for single tulips
- Arrangement (any type may be used)
- Arrangement (for novices only)

Out of the above nine classes there will be picked a "Best in Show" with a trophy presentation.

All entries must be in Plant 28 by 8:30 a.m. If you are in an outlying plant and wish to enter, contact the show's director, Kay Zuk, on Ext. 3391, and she will arrange to have your entry picked up that morning.

The Spring Flower Show will be open for viewing during both lunch periods, so you better brown bag it that day. But don't come if you have hay fever.

On June 15, the Garden Forum will sponsor the Rose Show in Plant 30, and on September 5, the Summer Show, last of the shows for this year.

TV auction

When it comes to tube watching, are you a commercial freak? If not, why don't you support WLIX/Channel 21, Long Island's public television network, in their annual fund-raising project, AUCTION 21.

AUCTION 21 is a week-long extravaganza, which will be telecast live, in color, beginning April 29, from Roosevelt Field Mall.

Deliver first modified A-6E

Cdr. Milt Beach, skipper of Attack Squadron 35, and Lt. Cdr. Don Seykowski, a bombardier/navigator who also serves as maintenance officer for VA-35, were at Calverton on April 19 to pick up delivery of a new plane. Well, it isn't exactly new, but considering the refurbishing it received, you could say the Intruder they flew away was a much more modern plane than when it was built six years ago.

It was the first delivery of 192 A-6As the Navy plans to modify to the latest A-6E Intruder configuration. Intruders selected from the Fleet for modification are chosen on their overall condition, and during mod work at Calverton they are fitted with a new radar, computer, and weapons-release system. So the fly-away A-6E can operationally outperform the A-6A—and that's pretty startling in itself because for years the A-6A has been recognized as the world's outstanding day-night, all-weather attack plane.

In the future, the "E" model will be even more effective: scheduled for incorporation in the model are TRAM (target recognition attack multi-sensor) system, which adds infrared and laser equipment for a more accurate weapons delivery, a new carrier airborne inertial navigation system, and a further missile capability.

Pictured at Calverton (above) for the first delivery celebration were Chuck Darling, A-6 FAD manager; Commander Seykowski; John Hughes, "E" mod manager; Lt. Cdr. Wayne Robinson, Navy A-6 Program Desk; Bill Trillo, A-6 program director; Commander Beach; and Capt. Joe Wilkinson, Navy A-6 project manager.

Talking about vital subjects

Personnel Director Dan Knowles and Medical Director Dr. Bob Jessup were at South Oaks Hospital in Amityville a couple of weeks ago, not as patients, but as panel participants of a very vital issue—absenteeism in industry. Dr. Jessup served on the planning committee for the conference while Knowles gave a talk on absenteeism as viewed by a personnel director.

Industry can help reduce absenteeism in some very tangible ways, suggested Knowles. Among them: preventive health-care programs, and treatment of employees as individuals. Business must try to offer meaningful work to independent, thinking individuals, said Knowles, rather than routine tasks. In this way, business will show its concern for its employees, and employees may very well reciprocate by showing more concern for the company.

Earlier, Knowles journeyed to Washington, D. C., to participate in a conference on industrial gerontology, or, the research and study of older workers in an industrial environment. Bill Voorhest, co-director of the Opportunity Development department, attended that conference also. Contrary to popular belief, that the older worker's productivity declines, Knowles said studies show that the experience and skill of the older worker can more than offset the physical advantages of a younger worker.

"There are too many wolves at our doorstep eager to take . . . business away from us, not only our industrial competitors but government agencies as well. We cannot afford to relax in these areas."

Consider this: estimating and pricing, the economical fashioning of a product before it ever gets off the drawing board, is regarded as one of the most important things this company does.

Wherever there are products, there are associated pricing and estimating efforts. Very often, it may be a matter of how well these men and women do their jobs that determines, in the long run, whether or not the company is profitable.

To keep pace with current pricing techniques and to help the company compete successfully for profitable new business, a new Estimating/Pricing Department has been formed. It is responsible for the timely, accurate and consistent preparation of all Grumman Aerospace cost estimates and price proposals.

Heading the new department is Frank Wisekal, director of Estimating/Pricing, who reports to Rolf Larson, director of Contracts. In their own words, these two men discuss the new organization, its significance to all company operations, and the evolution that has transformed estimating and pricing into the highly scientific function it is today.

Would you explain the statement that estimating is "one of the most important functions of this company"?

WISEKAL: Let's face it, in today's environment new procurements are few and far between. We not only have to attain technical and management excellence in proposals for new products, we must also attain excellence in terms of our estimate and the ability to support it. We must also achieve the same excellence in proposals for our so-called "sole-source" products. There are too many wolves at our doorstep eager to take that business away from us, not only our industrial competitors but government agencies as well. We cannot afford to relax in these areas.

How has the estimating and pricing process changed over, say, the past 20 years and what have been some of the factors which have caused this change?

LARSON: First, you must consider the nature of aerospace products during the 1950s. We produced some real fine products in those days but they were not as complex as today's sophisticated weapons systems and space vehicles. Therefore, estimating practices were relatively less complex than those required for today's products. During the past 10 years, though, the technological advances really stagger the mind. The new exotic materials, the use of machined parts instead of sheet metal and stringer fabrication, the new manufacturing methods and equipment such as the electron beam welder and the precise avionic integration requirements—all require more and more expertise in estimating.

Some other factors which contribute to today's estimating practices are the more stringent procurement regulations imposed on industry by the government and the tremendous increase in the level of detail required to support our estimates. For example, the A-6A development proposal in 1958 had a total of 32 pages and the E-2A development proposal in 1959 had 58 pages. The F-14 development proposal in 1968, on the other hand, had 915 pages and today's fiscal year proposals average 200 pages. In addition, today's methods of contracting differ greatly from those of the 1950s. During that era, cost-plus-type contracting was widely used, but today's methods are a mix of fixed-price and incentive-type contracts along with "design-to-cost" concepts. The mood of Congress today with regard to the Department of Defense and NASA procurements requires considerably more precise estimating techniques.

What does the "era of design-to-cost" mean?

WISEKAL: The design-to-cost concept was introduced about two years ago and is now gaining prominence with the issuance of each new proposal request for major competitive procurements. In effect, the customer dictates the performance parameters, then specifies the maximum amount of money he is willing to pay for the product. The most recent examples of this type of procurement are the Attack Experimental (AX), the Advanced Attack Helicopter (AAH) and the Earth's Limb Measurement Satellite (ELMS) proposal which we are currently working on.

What is a "grassroots" system and how does it apply to Grumman's estimating practices?

LARSON: Grassroots estimating refers to the situation in which we obtain manhour estimates for particular jobs directly from the engineering or shop level. While this method is valuable in many cases, it is still largely an opinion which may not be correlated with any facts or official corporate cost records and, therefore, may not be acceptable to a customer. We are continually seeking to develop new and sound estimating techniques which will be readily acceptable to our customers.

What was the principal motivation behind forming the new Estimating/Pricing Department?

WISEKAL: Actually, it came from a number of places both within Grumman and from outside the company. First, there was a strong desire within our own department, other major departments, and at the corporate level to improve the quality of our estimates and thus enhance our competitive position in the most economical fashion. At the same time, we received added stimulus from NAVPRO in Bethpage, NAVAIR in Washington, D.C., and the Navy's "Should-Cost" team to consolidate our estimating resources. As a result, we initiated a study employing key people from most departments to examine our estimating methods and systems and to make recommendations for improving our operation. The result was the formation of this new department.

How is the new centralized department organized?

LARSON: Basically, it matches the corporate matrix structure. That is, there is a pricing group which is program-oriented and an estimating group which is functionally oriented. Each program, existing or potential, has one or more pricing administrators assigned to it to service or coordinate all proposal activities for the program. Each major functional department has a group of people who estimate requirements for their own department.

Another major activity within the Estimating/Pricing Department is the cost analysis services group which is divided into three sections: data bank, estimating systems and proposal control. Each of the functional departments is scheduled to work with us to establish or compile Grumman and industry cost and performance data into a format which is readily retrievable for use in estimating or comparative cost analysis. The estimating systems group along with the assistance from our functional department resources, will refine existing estimating techniques and develop new ones. Proposal control will be the focal point for coordinating and scheduling all proposal requirements. The latter is no small task when you consider that during the past few years we have averaged approximately 7,000 proposals a year.

What are the primary advantages of this reorganization?

WISEKAL: As we see it, the main advantages are:

- It gets everyone working uniformly toward a common goal by coordinating our resources.
- It gives the role of estimating and pricing the professional status it has lacked in the past. While estimating is regarded as a very important task by most departments, by its very nature it is really a secondary function to the departments' operations. One of our objectives, therefore, is to raise estimating to a primary function.
- It combines the best estimating talent within the company to establish a corporate data bank and develop new estimating techniques. Most of the departments in the company, including our own, have attempted to accomplish this in the past with only partial success. With the formation of this new department, we can now approach this as a joint endeavor.

Who are the key people involved and what are their functions?

LARSON: Starting with our own operation, Joe Ryan is manager of the cost analysis services group; Ron Pond is manager of pricing activities; and Bill Hettinger is manager of estimating. Moving to the functional departments, the people in charge of the estimating functions are: Chris Hansen, Product Manufacturing; Bill Dorning, Technical Operations; Bruce Hurley, Quality Control; Art Filete, Resources and Administration; Frank Marciniak, Flight Acceptance Department; John Roecklein, Product Support; and Tom Tuohy, Procurement.

In general terms, how does the estimating process work, what are the various steps involved and how are the ultimate judgments reached?

WISEKAL: In most cases, the process begins with the receipt of the request for proposal. Then, an internal request for estimate—which contains such information as the scope of the work and schedules—is prepared and issued to all departments which request a response by a specific date. At this point, the estimators throughout the company start the estimating process which, depending on the given situation, can range from estimating from blueprints or drawings to examining Grumman and industry cost data for similar products to use for comparative purposes. Estimates are compiled, then discussions and meetings take place with program directors, and department directors and their managers, in order to get agreement on the estimate. Then, the estimate is sent to the Estimate/Pricing Department for integration into a corporate proposal. In the interim, at least with major proposals, an independent estimate is prepared by the estimating group and the pricing strategy is formulated with the program director and corporate management. All in all, many people are involved in the process which is geared to combining the best available judgments to reach final decisions.

Practicing the Art of Estimating

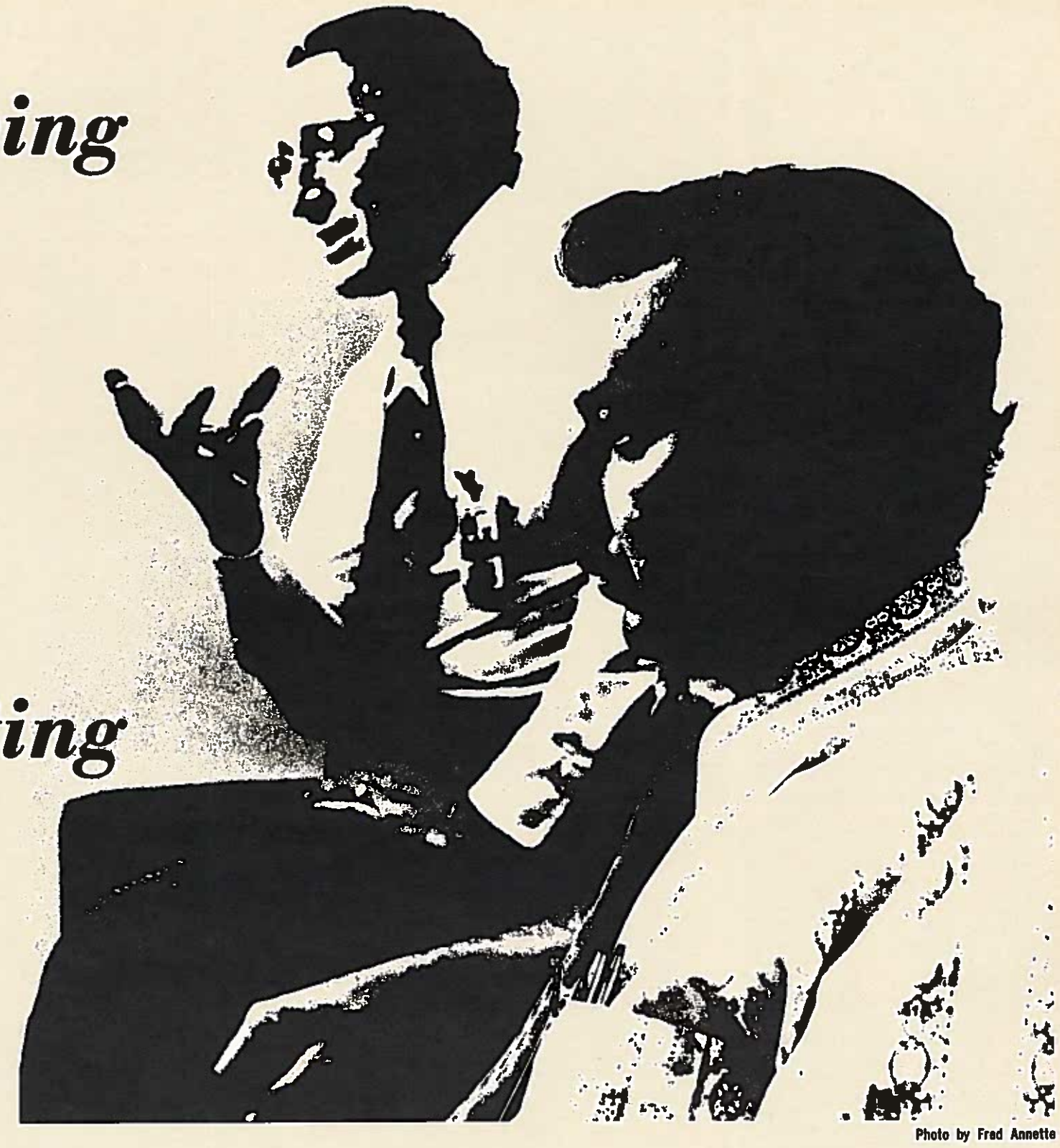


Photo by Fred Annette

What are the cost-drivers that necessitate in-depth examinations by estimators?

LARSON: Cost-drivers take many different forms. In one case, for example, it may be the use of exotic metals or expensive subsystems. In other instances, the imposition of too-stringent design or test specifications tend to drive the cost. Therefore, part of the estimating function is to identify these cost drivers and work with the engineering or production groups involved to seek less costly alternatives.

How is the computer utilized in estimating and pricing?

WISEKAL: The computer is a very important tool in today's estimating and pricing environment. First, it saves countless manhours by performing very basic functions such as the application of direct labor and overhead rates to manhour estimates to yield an answer in dollars. This may sound simple, but because of government requirements, in most cases this process must be repeated hundreds of times to compute dollar answers for each work-breakdown structure, for each labor and material category, and for both calendar and fiscal years. During the past few years we have expanded the use of the computer for estimating purposes by developing programs which will give us projected cash flows, return on investment data, ball-park estimates based on aircraft performance characteristics, life-cycle costs, and a host of other programs to take some form of the guesswork out of estimating.

How do you measure the total cost of preparing estimates?

LARSON: Some aspects are difficult to quantify. We do know that in the early part of this year there were approximately 260 people throughout the company who were directly involved in the process, while an equivalent number were indirectly involved. The salaries, benefits, office space and office services required to sustain that number of people costs approximately $10 million a year. Our goal, obviously, is to improve the quality of all our proposals and, at the same time, to reduce the overall cost through better coordination, selective use of our best estimating resources and less emphasis on the use of the grassroots systems.

How is the estimating function of Grumman directly affected by, say, the current difficulties the F-14 is experiencing?

WISEKAL: The difficulties we encountered with the F-14, which are now behind us, placed a significant drain on the company's estimating resources. The numerous costing and pricing activities involved a great number of people. Now that things have settled out we can use those valuable resources for other endeavors. In addition, the unfavorable publicity we received on the F-14 was read throughout the aerospace industry and the government procurement agencies. Since those people were without the benefit of all the facts in most cases our jobs were doubly difficult in trying to secure new business. Hopefully, the situation will improve from here on.

LARSON: One of the major things we have to look forward to with the Navy is the next procurement of the F-14 outside of the old contract. The next phase with this plane is now beginning to gel. We still have some hurdles to overcome and we're going to have a tough time arriving at the cost to consummate this new contract. We're doing our best to estimate a very tight price.

Many talents, can-do attitude helping Stuart keep pace with Florida environs

STUART, FLA.—It never made the papers, but Grummanites here are kind of proud of the note General Plant Manager Art Melrose got from outgoing Defense Secretary Melvin Laird earlier this year. In the note, Laird expressed gratitude to the people at Stuart for their contributions to the nation's security efforts.

In a way, the message, and the lack of fanfare it received, is indicative of the way they do business down here. Austere and efficient. "Low profile" might be the best way to describe it.

And in this land of high- and fast-rising condominiums, that's a difficult task to achieve. Martin County—home of Stuart and the Plant 77 facility—is reputed to be the fastest growing county in the U.S. Better believe it. Condominiums, motor inns, homes, restaurants, trailer parks, shopping centers. All are evidence of the tremendous growth that's over-taken this area in the past couple of years.

There's a lot going on at Plant 77, too, and they're about to bust out of their present facilities at Stuart. The diversity and amount of sub-assembly and fabrication work here is somewhat staggering.

Here's the way it stacks up:

- Gulfstream hydraulic lines
- Dassault engine pods
- Special avionics projects for the OV-1 Mohawk
- Cyclic inspection and repair as necessary (IRAN) program on Army Mohawks, and conversion of "C" model Mohawks to the latest "D" models.
- Spares for out-of-production aircraft
- F-14 pylons and missile adapters
- A-6E pylon rework and repair, modifications on wiring and harnesses.
- E-2C wings, ailerons, elevators, flaps, and cowlings
- Spares and electrical assemblies for Intruder AIM kits

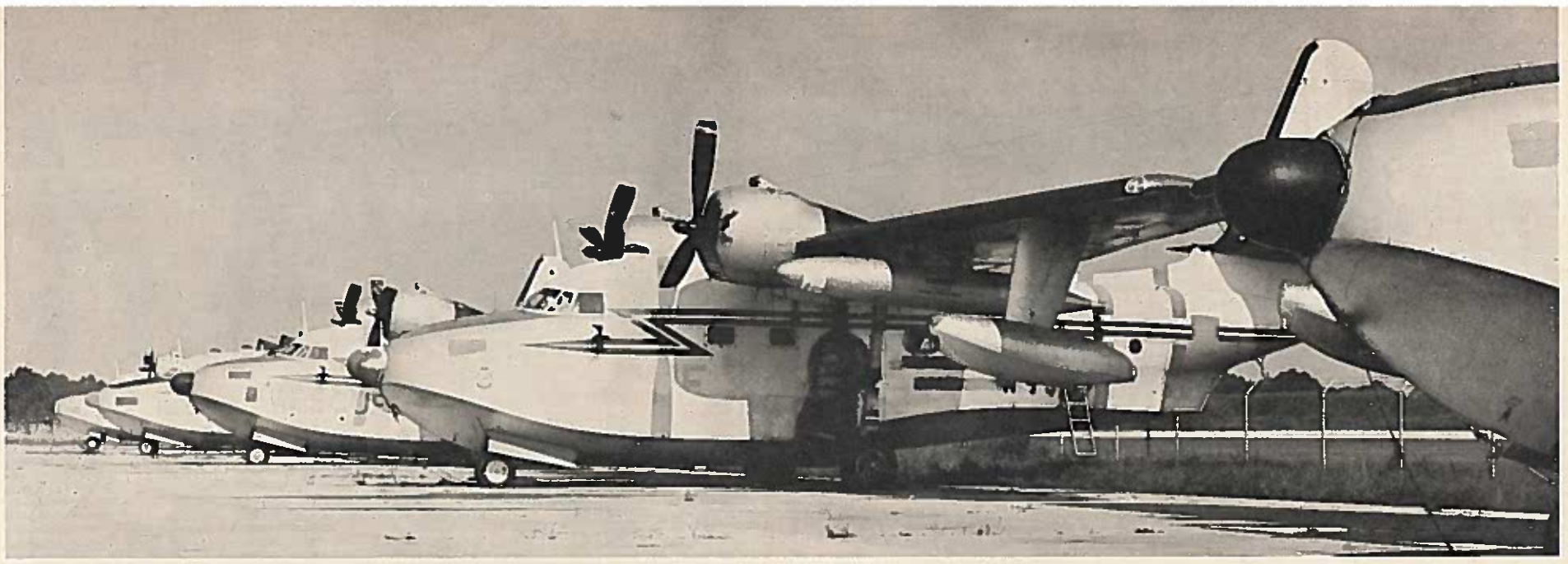
That's not the full measure, either. Soon, fabrication of the aft-center body on the Tomcat will move to Stuart.

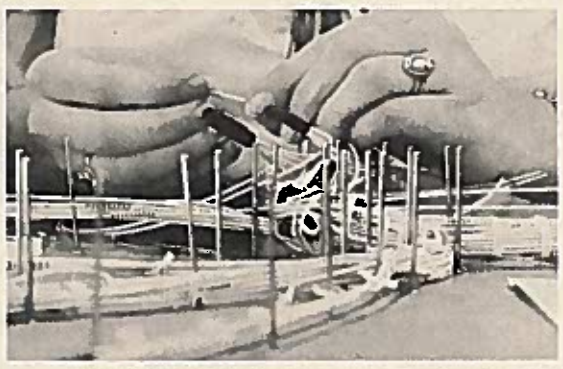
Do you remember the HU-16 Albatross? That rugged amphibian still serves several South American countries in air-sea rescue and anti-submarine warfare roles. Stuart is home for the Albatross when it comes back to the States for a periodic checkup—IRAN, as they call it—during which Plant 77 mechanics, technicians, and pilots prepare the workhorse amphibian for further operations.

How can so few achieve so much, at least in the diversity and scope of sub-assembly work? Melrose points to the many talents of the people at Stuart, and their willingness and ability to cross-train their skills so that they can switch jobs as the need arises.

There was a time when the Stuart facility was little more than a winter flight-test haven for a northern company. But that was more than 20 years ago. Things have changed since then, and Stuart now is comprised of more than 400 people situated in four hangar-type plants.

As Melrose likes to put it: "We're small enough to get our hands around a job, and we're big enough to accomplish it."





service milestones

35

Edward G. Carranza, Prototype (2)
Francis Schnell, Inventory Control (2)
Frank Turrell, Prod Release & Analysis (2)

30

Michael J. Giannotti, Prod. Ctl-Parts Ctl. (1)
Warren Stein, Router & Shear (1)
Mary E. Chisholm, Dod A/C Prog. Staff (5)
Otto Schunk, Preflight Finals/Sys. Install (6)
Robert L. Ellisen, P/S Field Serv. Mgmt. (15)
Frank A. Giresi, Ship & Spares Consolid (17)
Francis P. O'Hara, B/P Warehouse (21)
Stanley R. Jarusiewic, Plexiglas (27)
Leon Kaprinski, Fiberglas (27)
John J. Czerwinski, Sub-Assembly Major (27)

25

Arthur G. Peterson Jr., F-14 Mfg.-M.E. Methods (1)
Werner J. Langhauser, F-14 Mfg.-M.E. Methods (1)
Edward Jasuta, Configuration Data Mgmt. (1)
Robert Duerr, Dispatching WIP, (2)
Edward L. DeMers, Prod. Mfg. Admin. (2)
John E. Main, Tool Control (2)
Robert V. Laurita, Conventional Machines (3)
Arthur E. Baxter, Assy. Methods & Planning (3)
Anthony J. Lombardi, Prod. Ctl.-Parts Ctl. (3)
Edward R. Braia, Wing Sub-Assembly (4)
Joseph D. Cassese, Mfg. Test Plts. Mgmt. & Staff (3)
John E. Meany, Contracts A/C, (5)
Carl B. Smith Jr., Preflight Finals/Sys. Install. (6)
Charles J. Bowman, Prod. Ctl.-Parts Ctl. (6)
Charles E. Scheffer, Prod. Ctl.-Parts Ctl. (6)
Robert V. Springer, Trans-Operations (20)
John J. Crochiere, Trans-Operations (20)
Charles J. Hoffmann, Trans-Equipment (20)
Stephen M. Cholewka, B/P Warehouse (21)
Robert C. Beckwith, Center Section-Sub Assembly (27)
John Pizzuti, Machined Parts/Matl. (30)
William R. Harris, General Act (30)
Anthony A. Fuori, P/S Field Service Mgmt. (34)
Joseph Schnipper, QC Admin. & Prog. (35)
Alexander Charnay, P/S Training Proj. Mgrs. (39)
Andrew J. Breunig, Q.C. Inspection Mgmt. (35)
Thomas B. Richardson, Mfg. Test Plts. Mgmt. & Staff (36)
John R. Van Sant Jr., Insp.-Mechanical (36)
Edwin Pfeffer, B/P Warehouse (37)
George S. Furlong, B/P Warehouse (37)
Paul T. Logue, Prod. Mgmt. Ops/Stf. (77)

20

Thomas J. Kelly, V.P., director, space programs
Mary A. Stilwell, Mail Service (1)
Anna Borak, Food Service (2)
John C. Rocco, Engraving (3)
Rinaldo Costa, Aero Design & Analysis (5)
Jeanne A. Olsen, Executive Staff (5)
William E. Overton, Final Test (6)
Robert J. Kopack, Inventory Control (30)
John F. Finnegan, Machined Parts/Raw Materials (30)
Gilbert T. Raynor, Structural Analysis (35)

15

Edwin Ehlenberger, EBW Final Assy. (2)
Helma T. Connor, Forecasting & Loading (2)
Robert Lertora, Jigs & Fixtures (2)
Sylvester J. Damiani, Jigs & Fixtures (2)
Jacob D. VanCuilenburg, Machine Shop (2)
Peter D. Mirabella, Form Block (2)
Richard C. Bonelli, P/S Electro Mech. Des. Engg. (2)
William W. Kennard Jr., Conventional Machines (4)
Francis H. Colbert, Conventional Machines (4)
Charles F. Koop, Mach. Oper--Tech. Service (3)
James V. LaSala, Marshalling & Finish Tool Cont. (3)
John Wojtyna, Maint.-Rearrangment (3)
Ethel M. LoDolce, Medical (3)
Arthur Lemp, Aux. Sys. & Arma Control (4)
John G. Devitt, Environmental (5)
Norma I. Conklin, Spl. Program & Promotion (5)
Charles H. Rodenburg, Final Paint (6)
George E. Morris, Final Paint (6)
Dexter A. Martin, Release & Control (15)
Paul R. Cavonis, Ship & Spares Consolid (17)
Frank Marchese, Trans-Operations (20)

(Continued on page 12)

A. G. Peterson | W. J. Langhauser | E. Jasuta | R. Duerr

E. De Mers | J. E. Main | R. V. Laurita | E. R. Braia

J. D. Cassese | A. J. Lombardi | A. E. Baxter | J. E. Meany

C. B. Smith | C. E. Scheffer | R. V. Springer | S. M. Cholewka

R. C. Beckwith | J. Pizzuti | W. R. Harris | A. A. Fuori

J. Schnipper | A. J. Breunig | T. B. Richardson | J. R. Van Sant Jr.

Picone fires 664 Trader string to delay Knights pin coronation

If the race in the Trader league was supposed to be over — unofficially, that is—nobody bothered to tell Ben Picone about it. Although they are still in second place, the O-8s put themselves within striking distance of the league-leading Knights a couple of weeks ago when Picone threw a record 664 during an 18-3 runaway over the Fondoos. He reached that total with 246 and 229 games. Earlier, Frank Nelson clicked for 200-203-598 and Bob Washington hit 225-577, a total matched by Sal Scalfani the following week. . . . Don Eivers collected individual honors with 228-224-822 in the Masters loop, edging Vin Crevoiserat's 809 and Ed Gabriel's 232-801 in the four-game set.

Bill Gentzlinger nearly caught up to his wife Nancy in recent Century Mixed action he twirled a 242 for men's season game honors. Nance holds the women's marks of 244 and 595. Mark Guss's 220-575 and Pat Von DeWetering's 205-540 led the way in a later round. . . . Mark Mellinger pumped out 622 on a brace of 213s to highlight Gray action, with Charles Calabria's 230 another standout, while Ted Dija's 204-235-622 and Tom O'Connor's 209-585 paced Aerospace competition. . . . Rudy Dunkley shot 233-201-605 to edge Marty Susa, 226-603, for Nite Owl honors.

It's "wait till next year" for the eighth-place Unknowns in the Red circuit, but in a parting shot at the fates, Charlie Marchessault connected for 233-629 to lead individual scoring in recent sessions. Trailing were Milt Guttenberger, 206-212-605, and Wes Johnson, 228-201-580, and in earlier play, Dick Dirocco, 218-594, and Ed Schoenfeld, 201-215-581. . . . Only a point separated the Mustangs and Rams earlier this month in the Classified loop, and Bob Hoehn's 211-216-605 for the Rams and Bob Dudonis's 236-592 for the Mustangs kept the title picture rather cloudy. Jack Brooks contributed 222-223-609 but it was of no avail as the Jets are well out of contention. Other high scorers: Charlie Catalano, 218-590; Norm McDowel, 205-223-588; and John Donovan, 209-589.

Rounding out the top scores: BLACK - Bill Voigt, 237-600; Walt Stehlin, 205-204-592; Russ Player, 217-590. HAWKEYE MIXED - Tom Cava, 225; Chet Everoski, 568; Dot Jacobsen, 202-523; Mary Rodriguez, 496. SYOSSET MIXED - Judy Sommer, 216-564; Pat Roth, 503; John Betterino, 216-576; Eric Bunzel, 215-543. OUTPOST - Joe Avanzato, 210-584; Joe Marriott, 201-584; Pete Trentacoste, 203-575; Bernie Poelker, 211-570. BLUE MIXED - John Traina, 215-599; Kathy Hager, 210-529; Dennis Giovanelli, 547; Don Curran, 207-562.

Mitt thanks! When a guy helps put the Calverton facility at 79 percent participation in the recent GAA membership drive, why not thank him . . . and when he wins a prize doing it, that should call for a handshake, too. (What else?) That's Joe Tagliavia (C), who directed the Calverton drive, offering congratulations to Ed Mantell, who won a set of Grumman glasses. Other winners included (L to R) Pete Mezzapelle, Anthony Podejko, and Charles Brinkman, and Joe DeGirolamo (not present) who won pocket Instamatic.

Calling low-handicap swingers for varsity golf team tryouts

The annual 54-hole golf trek to decide the makeup of the Grumman varsity tee team is set to begin on Monday, May 14, at Bethpage State Park. Only Grumman golfers with handicaps of 10 or less are eligible to enter the tryouts. Handicaps must have been established in 1972 over regulation layouts, and all league or club handicaps should be included on the entry form.

Varsity berths will go to the eight low medal players in the three 18-hole rounds. After the second round, set for May 16, the field will be sliced to the 16 low scorers, with the varsity eight determined on total scoring for the 54 holes, which ends on May 21. Play will be held on the Red and Black courses at Bethpage.

Entry forms should be forwarded to Mike Cherry at the GAA office, Plant 30, by May 3.

The Grumman varsity, perennial champion of the L.I. Industrial circuit, will be seeking its ninth straight team title in that play.

Varsity golf tryouts

Entry blank

Name ..... Perm. No. .....

Dept. ..... Plant ..... Ext. .....

Club or league	Course	Handicap
.....	.....	.....
.....	.....	.....
.....	.....	.....

Submit to GAA, Plant 30, by May 3

Rice tops Grumman marksmen in L. I. Industrial pistol loop

In the old days, it was notches on the gun. And if you didn't get that one last notch, you were a goner.

Fortunately, for a lot of guys in the L.I. Industrial Pistol League, those days are gone forever—or at least we hope so — and second best can be traumatic, but not final.

Dave Rice, who recorded a 272.8 average during the past season, topped all Grumman shooters in the pistol loop to earn 1st master. Among other top scorers in the .22 caliber competition: Hank Chau, 269.8, 1st expert; Phil Boehm, 263.1, 1st sharpshooter; and Ron Trenkner, 269.4, 1st marksman.

Final standings in the Industrial league included Grumman Gold, 8-2 record, first in the handicap expert division; Grumman B, 7-3, first, shoulder-to-shoulder (not including handicap), sharpshooter division; Grumman E, 5-5, first,handicap sharpshooter division.

And Dave Rice, with 276 and 270 scores, helped the Grumman centerfire team—that's .38 and .45 caliber competition—to finally achieve a 6-6 ranking with victories over Roslyn R&P and Sagamore R&P in the South Shore League.

In other action, the Grumman Tomcats traveled to Monroe, N. Y., to compete in the NRA national indoor sectional meet, with Phil Boehm collecting first place for rapid-fire in sharpshooter class with 189-3X. Ron Trenkner picked up five individual awards in the marksman class, including an 833-11X to win the aggregate title.

Lee table champ at Plant 36; Gun Club plans trap shoot

At Plant 36, Gat Lee and Frank Leach flailed away at each other (figuratively, of course) during a blistering finish to the singles play. Leach knocked Lee out of the winner's bracket with a 21-19, 23-21 decision, but Lee came back to take a second encounter 21-14, 23-21 in the two-defeats-and-out competition. In the finale, Gat once again turned the trick as he tripped Frank 21-14, 21-13, 21-19 to walk off with singles honors.

Leach was also on the short end of the doubles scoring as he and Bill Dunstane lost to Dave Hutchinson and John Rotzman, 19-21, 20-22, in the championship wrap-up.

Calverton range

The Rod & Gun Club plans a season of trapshooting, including open and championship activity, at the Grumman facility at Calverton starting May 6. Only Rod & Gun members (including associates) are eligible, youngsters must be 14 years of age minimum, and targets and shells may be purchased from the club. Shooting is scheduled from 10 a.m. to 1 p.m. on Sundays. For more information, contact Mike Russo or Al Battistelli, Ext. 3187, or GAA, Ext. 2133 or 2269.

For Adoption

KITTENS: Part Siamese, 2 blk., 2 blk. and white., five weeks old and litter trained. 884-3421.

IRISH SETTER: 9 month old, female, compl. housebroken, good with children. WE 5-1115.

SHEEPDOG: 1 yr. old, pleasant disposition, house broken. 212-527-4038.

For Rent

HOUSE: Riverhead, 2 story, 3½ bedrms., 1½ baths, two firepl., one acre, wooded, nr. shops, schools, yearly lease. 727-2042.

APARTMENT: Shirley, N.Y., 6 rm. in new house, 6 mi. from plt. 6. 281-2855.

APARTMENT: Northport, 1 bedrm., kitchenette, liv. rm., bath, newly decor., $210/mo. + security. 757-3430.

FURNISH. RM.: Priv. bath, entr., nr. Grumman. WE 5-5012 after 6 p.m.

FURNISH. RM.: Hicksville-Jericho area. GE 3-6192.

APARTMENTS: Two new 2 bedrm. apartments, nr. schools, shops, upper floor, $300/mo., lower floor, $250/mo., priv., large back yd. 588-1778.

TRAILER: Hardtp camper, sleeps 7, foam mattress, gas range, sink, ice box, dinnette, storage. HA 7-7344.

ROTILLER: Powerful, $8.50 for 4 hrs., $15 per day. 543-7464.

TOWN HOUSE: Sugarbush, Vermont, furn., 3 bdrm. 2 baths, swimming pool, 2 baths, tennis court, golf nearby, weekly, or monthly. 692-7134.

ROOM: Massapequa furn., pvt. entr., bath, a/c, refrig., hot plate. Gen Heman. $40 week. 798-3595.

APT.: 10 min. from Grumman, 3½ rm., pvt. entr., zone heat, utilities incl., June occupancy. FL 2-7872.

ROOM: Furn., 2 mi. to Bethpage plants. 798-1676.

DOCK SPACE: Sayville area, reasonable. 589-4931.

APT.: 2½ rm., ½ kit., lvg. rm., bdrm., West Babylon. Evgs. 581-8981.

APT.: Shirley, Long Is., 6 rm. 281-2855.

CAMPER TRAILER: Hdtp., sleeps 7, foam mattr., gas range, sink, ice box, dinette, storage. HA 7-7344.

TOWNHOUSE: Fully furnish., Sugarbush, Vermount, 3 bedrms., 2 baths, w/w, dish. wash., wash-dryer, swimming pool and tennis on premises, 18 hole golf 1 mi. away. 692-7134.

COTTAGE: Housekeeping, Loon Lake, priv. beach, boats, shuffle bd., horse shoes, badminton, $65-$85 per week. 271-5886.

Ride Wanted

BAYSIDE: Or arrangements to meet in Flushing or Jamaica to Plant 4, for 7 a.m. shift and return at 3:30. Will pay if necessary. 212-229-2532.

RONKONKOMA: To Plant 1, 8 a.m. to 4:30 p.m. call Phyllis, Ext. 86484.

Wanted

FURN. APARTMENT: 2 rms., priv. entr./bath, nr. Grumman. $140. 735-0244 after 5 p.m.

MUSTANG: '65-67, clean condition only. 929-4626.

STATION WAGON: '66-68, good condition, p.s. Chevrolet pref., 669-1856 Sat. mornings.

TRAINS: Lionel "0" and "027" gauge. Evgs. 581-2999.

PIANO STOOL: Round, swivel. 289-4863.

TUTOR TEXT: Advanced Bidding, by Charles Goren. 289-4863.

CAPRI: '71/'72, will pay book value. 751-1256.

APT.: 3-4 room, for working couples, one child, Bethpage, Farmingdale, Babylon areas, $200 or under. After 6 p.m. 884-1147.

DEPTH FINDER: Used. 666-9992.

CAP: Pick up truck with 8 ft. bed. 661-0363.

TOY CARS: Cash paid, old or new, Dinky, Lesney, Matchbox, Gama, Ziss, etc. FL 2-2728.

TRAINS: Old. elec., Lionel, Ives, Amer. Flyer, small or lge. sets. JU 4-6771.

GRUMMAN CANOE: 15 ft. or 17 ft., standard model. 221-8755.

SEAT COVERS: '60 TR-3. 751-7992.

PICK-UP TRUCK: '60 to '65, or suburban type vehicle. 265-4319.

TRAINS: Lionel or Amer. flyer. OR 8-2518.

TRAINS: American flyer or Lionel. PY 1-8889.

BAR STOOLS: Swivel w/backs, four. 921-1895.

TRAINS: Old electr., Lionel, Ives, or American Flyer, small or large sets. JU 4-6771.

PORTABLE JACK: For auto. trans. 293-5843.

Car Pool

SMITHTOWN: Nesconset area to Plt. 1, 8 to 4:30. 265-6864.

EAST NORTHPORT: Larkfield Rd. & Cedar Rd. to Plt. 25, 8:12 a.m. to 4:42 p.m. 368-3830.

HAUPPAUGE: Vicinity of Rte. 111 & the Smithtown Bypass to Plt. 15; 8:12 a.m. to 4:42 p.m. 265-1249.

For Sale

MINI-BIKE: Rupp "hustler," 4 hp. torque converter, front/rear shks., $175. 732-6034.

CAMPER: '65 Wayfairer by Nimrodd, sleeps 2-4, elect. outlets, new canvas, blueprints for canvas. $50. 667-0128 after 6 p.m.

PONTIAC: '68 GTO, 400cc eng., 4 barr., 4 spd. hurst shift synchr mesh., burglar alarm. FO 8-3886.

PLYMOUTH: '69 Fury III, 2 dr. hdtp., red/blk. vinyl tp., 318 auto tram., 3.28 s.g. diff., tint. gl., weld trail. hitch, $1,100. 667-4864.

OUTBD. MOTOR: 40 hp Evinrudde (twinfast), elec. start, w/contr., $300. WE 5-0885. after 5 p.m.

VW: '65 Square back, electron. ignition, 2 tries, $395. 266-2248.

For Sale

HOUSE: Hauppauge, ranch, 7-rm., 2 bath, car gar, bsmt., corner, ½ acre, trees, inground pool, stockade fence, 2 patios, sun-deck, exp. attic, s/s, w/w, dbl. oven, refrig, d/w, washer, dryer, furn., 8-yr., N. St. Pkwy., L.I.E., $54,000 direct sale. 234-0289/234-0271.

HOUSE: W. Sayville, ranch, 3-bdrm, o.h.w., s/s, ¼ acre, attach, gar, fenced yard, patio, $30,990. 567-0860.

HOUSE: S. Huntington, spacious 2-yr., 10 rm. col., red. $46,500. Evgs. 549-5332.

HOUSE: Plainview, 5-rm, corner, 3-vdrm ranch, near shop, walk to Grumman, s/s, fenced yards, $30,000. 938-8731.

HOUSE: Massaqequa, split level, 4 bdrm., 2 bathrooms, eat-in-kit, att. gar, fenced yard, pan. fam. rm w/ fireplace, corner plot, $38,900. 691-1630.

HOUSE: Deer Park, Birchwood split, 4 bdrm, 1½ bath, eat-in-kit, dng. rm. pan. den, fin. bsmt. (mother-dght.), w/w, alum. awning cover patio, s/s, new alum. gutters & overhang, 2 zone heat. After 6 p.m. 667-4393.

PROPERTY: ½ acre lots, Sunny Rio Rancho Estates, Alburque, N.M., priced below current mark. value, low taxes. 589-4856.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.
Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

MISC.: Rerig., 16 cu. ft., $35; gas stove, 30 in., $25; business typewriter, $25; car rims, 14 in., $10; saber saw, $15. 935-0885.

RAMBLER: '69 Rebel, pwr. steer., 6-cyl., auto trans., $950. 842-4458.

F-85: '65 Sedan, 45,000 mi., all power, auto trans., $300. Evgs. 427-4103.

FAIRLANE: '65 Wagon, $525. 751-3534.

VW: '65 53 hp, Bosch sys., oil & temp gauges, radio, new seats & snows/mount on wheel, $350. JU 1-3125.

CHEV.: '67 Impala wagon, 6 pass., all power, a/c, new brakes & tires, $725. 543-5365.

FALCON: '65 Wagon, 4-dr., 6-cyl., new brakes, new shocks, 2 snows/mounted, 65,000 mi., auto., carpeting, $425. LT 9-23762.

SATELLITE: '67, orig. own., dk. red w/blk vinyl, fac. a/c, auto trans., all power, r/h, rear defog., 5 reg. w/w tires & 2 snow studded tries, all batt. needs trans. work $500. (212) 423-4116.

PEUGOT: '71, 4-dr. sedan, sun-roof, auto, a/c, am-fm stereo, bumper guards, $2275. 842-1437.

CADILLAC: '68 Coupe, rebuilt trans., a/c, all power, $2800. 681-1352.

CORVETTE: '67 427-390 hp, 4-spd, 5 new polysteel tires, 2 tops, alarm, am-fm, red, $2800. Between 9-12 noon. 681-1352.

SATELLITE: '72 Wagon, 8-pass, all power, fac. air. AR1-8657.

GALAXIE: '65, 4-dr. hd. top, all power. PE 1-3470.

GALAXIE: '67, 4-dr., 289 c.i., auto, new trans & brakes, shocks, carb, snows, $550. IV 9-2117.

BUICK: '64 Wagon, V-8, r/h, ask. $200. 271-6261.

VW: '66 Bug, $550. 724-3135.

DODGE: '69 Coronet 440, wagon, 6-pass, fac. air, roof rack, ex, $1395. 427-6372.

TRIUMPH: '70 Spitfire GT6+, 2000 cc, radio, rear window defrost, decambered, $2,000. FO 8-2258.

VW: '70 Dune Buggy, top, side curtains, ask. $750. 477-1520.

CHEV.: '64 Wagon, V-8 auto trans., 751-1327.

DART: Swinger, '71, 1-sr. 6 cyl. stand. trans. 751-1327.

HOUSE: Lake Grove, col. splanch, 8-rm, 4-bdrm., 2½ bath, pool, ex., $46,000. 585-3964.

HOUSE: Port Washington, 2 story col, lvg. rm., fireplace, bay window, dng. rm., kit. slate floor, 3 bd-rm., 1½ bath, 2 car gar, oversized property, w/w drapes, $49,500. 883-5054.

HOUSE: Strathmore East, 4-yr L-shape ranch, 1/3 acre, lndscpd., fenced, 3 bdrm, 2 bath, lvg. rm w/ fireplace, dng. rm. lge. kit. w/break. area, w/w, s/s, patio, 6 appli. w/ self-clean oven. Mid-thirties. 473-0889.

PROPERTY: Fla., Port Malabar near Disney., 2 lots, 160 ft. x 125 ft., $2400. cash and take over mo. pay., market price over $8000. Evgs. 931-4395.

PLYMOUTH: '65 V8. 427-6359, evgs.

CAMERA: Polaroid 250, w/flash attach., carr. case, timer, $70. 822-3078.

VW: '68 Bug, w/'70 motor, sun roof, $725. 585-9786.

CHEVY: '55, 4 spd. trans., 456 posi-rear Johnson piston, 5-two barr. carb., 6 cyl., won 76 trophies, $400. 796-0174.

PINGPONG TBL.: Regular size, folds up, paddles, must sell, $25. 798-3216.

HOUSE: Centerport, waterview, brick ranch, wooded acre, 3 bedrms., full a/c, fam. rm., 2 baths, firepl., ful basemt., beach rites, priv. rd., $69,900. 757-7910.

TOYOTA: Crown '69, 4 dr. sedan, 29,000 mi., r&h, snows/wheels. 665-0213.

GALAXIE: '62, 50,000 mi., r/h, auto. V8, $500. 485-6819, after 6:30 p.m.

MISC.: Electro. spkrs. system, match. pair, $50; Garrard Stereo turntbl., $35; Manual add. mach., $25. 543-4035.

HOUSE: Levitt Ranch, 4 bedrms., 2 baths, country kitch., appli., walk to pool, schools, church, stores, ask. $36,000. WE 1-2196.

MOTORCYCLE: Honda '71, 50cc trail bike, Z50A, 3 spd., red. FL 4-6314.

MISC.: HO car trks., accessories, 30 straight, 43 curved, many extras, $75. 543-3094.

RAMBLER: '68 American, 2 dr., 6 cyl. auto., p/s, a/c, tint./gl., posi-tract., heavy duty suspension, lt. pack. group., 7 tries, mount. snows, 38,000 mi., $975. JU 5-8992.

MISC.: Chef gas range, apartmt. size, coppertone, $75; G.E. Elect., cooker, w/Pyrex inseerts, w/stand, $20. 785-7668.

HOUSE: Stonybrook, Strathmore, 4 bdrm. cape, 2 baths, dbl. gar., w/w, s/s, prof. lndscpd., appli., wood. 1/3 acre, $35,500. 751-3472.

BOAT: 24 ft. Chris Craft sea skiff, '63, bunks, cushions, 185 hp, FWC, navy top, full canvass, $3,000. MO 5-1628.

GALAXIE: '62, auto, 4 dr., low mi., $125. JU 4-6387.

For Sale

BOAT: Chris Craft 23 ft., fbgls., 155 hp, V-6 1/0 deep V, full vinyl top. 283-3248.

BOAT: '64 20 ft. Grady white w/ '67 100 hp Johnson, make reason. offer. 842-5906.

BOAT: 14 ft. Penn Yan w/ glass bottom, 35 hp Johnson w/ elect. start., Holzclaw trailer, tuned, pointed, $400. 757-0234.

BOAT: Luhrs, sedan, '64 28 ft., sleeps 6, stand up head, fly bridge, 200 hp, gray, $4900. 935-1013.

SAILBOAT: 22½ ft. Pearson Electra, fbgls, keel, sleeps four, main, job, genda, 6 hp, outbd. 261-0234.

TRAVEL TRAILER: '71 17 ft. Lancer, fully self-cont., sleeps six, many ex, $2400. After 4:30 p.m. 888-4662.

MOBILE HOME: '71 Parkwood, 12 ft. x 65 ft., cent. a/c, w/w, unfurn., shed & skirt incld, $10,000. Evgs. 727-3131.

CYCLE: '70 Bridgestone, 350 cc'c, 40 hp, signals, 6 forward speeds, crash bars, sissy bar w/ lugg. rack, helmet, under 10,000 mi., $500. 698-3721.

TENT CAMPER: '70 Apache Mesa III solid state, sleeps 6, refrig, 3 burner stove, propane tank, 12 gal, water tank, sink, dinette, $1000. 732-4210.

OUTBD. GAS TANKS: (1) 12 gal., ask. $20. 584-7348.

CAMPER TRAILER: '69 Starcraft, Starmaster-8, sleeps 8. sink, icebox, closets, curtains, tent-room, $950. 473-8859.

GOLF CLUBS: 1, 2, 3, 4 woods Haig ultra, used 2 seasons, $50. Wel-1247.

PIANO: Baby Grand, deliv. incl., $375. 888-7949.

TOP: Navy, 6 ft. wide, comple. w/ ss Hardware, $20. 751-1706.

TENT: Morsan's "Best", 10 ft x 13 ft. awning 10 ft x 15 ft, $15. 420-9472.

MOTORCYCLE: '7 Harley Davidson super glide, 1200 cc, black, 6 in. ext., drag pipes, '73 seat & rear fender, $1850. Evgs. FL 4-3677.

TIRES: (2) 7:00 x 13 on rims, $10 for both. (212) 444-8677.

PIANO: Console, walnut finish, contemp. styling, 3-yrs old,$550. evgs. 692-2738.

SAILBOAT: Sailstar Corinthian #249, 19½ ft., fbgl. keel sloop, lg. cockpit, cabins sleeps 2, working sails, plus geneo, spinnaker, full cockpit cover, $2,400. 751-0697.

GAS RANGE: 36 in., w/heavy chr. top/griddle; Refrig., 10 cu. ft., $75/both. 488-3767.

MOTORCYCLE: '67 Norton, 750 cc, recent. tuned, low mi., $500. LT 9-3762.

FORD: '67 XL, 390 cu., a/c, p/s, auto. trans., $900 or best offer. 363-2211 after 6 p.m.

VACUUM CLEAN.: Hoover, compl. rebuilt, $25. WE 5-6836.

HOUSE: 3 bedrm. ranch. w/w, mirr, in liv., full basemt., att. gar./shop, 12x3 pool w/fence, new dbl. driveway, appli., xtras, nr. park, school, $34,900. 862-8372.

VALIANT: '66 4 dr., p/s, auto. trans., $400 firm. 541-4382 after 6 p.m.

VW: '60, sunroof, $65. 283-1198.

MALIBU: '72, V-8 auto. trans., p/s, p/b, r/h, 8,300, grn. w/lt. grn., vinyl tp., $2,500. 269-6259.

COLLIES: akc., 6 wks., aquerogue, 722-3017after 5 p.m.

IMPALA: '69, 4 dr. sedan, new brks., batt., snows, $1,500 firm., 928-3278.

SPRITE: '68 Austin Healey, hdtp./new conv. tp., radial tires, 30 mi./gal., r/h, $795 firm. 727-6525 days only.

LAWN EDGER: Wards, used one season, $50. 822-8678.

OUTBD. MOTOR: '72 4 hp. Mercury, 12 hrs., f-n-r gears, long shaft, $225. LI 1-5407.

MISC.: Accordian drs., naugahyde with lock, 9 ft. 2 in, x 7 ft., $75; Tires, 600x15 ww, Trenckner, ext. 2064.

HOUSE: Shoreham, 3 bedrm., cape, bath, kitch., din. rm., liv. rm., gar., fenced, patio, 75x100, low taxes, $30,500. 744-1398.

GOLF CLUBS: McGregor, matched set, mens, woods 1 thru 4, irons 2 through pw, used two seasons, $150 firm. 549-8714.

STATION WAGON: '66 Ford country squire, a/c, tint. glass, w/w, r/h, $775. 796-6159.

FURNITURE: Fruitwood french prov. coffee tbl., two end tbl., three lamps, reasonable. 751-4982.

FREEZER: Upright, 18 cu. ft., United harvest queen "commercial," $200. 928-1043.

SAAB: '69, model 96, V4 engine, 4 spd. trans., 20 to 25 mpg., $600. 924-6398.

VEGA: '72 hatchback, G.T., $1,900. 585-3488.

For Sale

PUPPIES: Shelties, akc. reg., champion sired. $60-$75. 751-1376.

TORINO GT: '70, standard shift, new tires, yellow w/lazer stripe, 302 V8 eng., ask. $1,600. 271-1375.

DEN FURNITURE: 6 pcs. Ratan, sofa, 2 chrs., 2 end tbl., 1 coffee tbl., $150. 586-8640.

PICK-UP TRUCK: '65 Ford, ½ ton, 6 cyl., 3 spd., ask $850. 271-9097.

WAGONEER: '63 Jeep, V8 standard, 4 wheel drive, locking hubs, $700. 473-6357.

HOUSE: Farmingdale, colonial, 3 bedrm., new eat-in kitch., bath, liv. rm., formal din. rm., front sun room, screened back patio, fin. basemt. rm., ohw., nr. trans. school distr. 22, $34,500. CH 9-9313 after 4 p.m.

MISC.: Speed-radar-defector, clips on sun visor, used. approx. 16 hrs., $20. B. Eliezer, Ext. 86791.

TOYOTA: '72 Mk II, s/w auto., a/c, r/h, $2,300. 724-2942.

VW ENGINES: '66, 50 hp. complete, $175; '65 40 hp. compl., $150. 694-2392.

POPUP CAMPER: '69 Apache Aamada, sleeps 8, canopy, spare, 110v/12v, water, dinette, stove., $1,450. 581-4501.

DINING RM. SET: Blond 6 pc., 4 chr., tbl. 34x60 w/12 in. leaf, 1 china closet w/drawer, bott. stor. and tbl. pads, $75. 694-4288.

MINI-BIKE: Rupp, 4 hp, torque conv., f&r shocks & brks., 732-6034.

BIKE: 16 in., w/training wheels, $20. 585-7628.

TRAILER: '72, 23 ft. Pathfinder, front kit, sleeps 6, $3,150. 864-9397.

TAPE DECK: Am/fm 8 trk., stereo, ask. $95. 764-6309 after 5 p.m.

IRONER: Ironrite roller type, ask $15. CA 1-6269.

HOUSE: Coram, 2 yr., 4 bedrm. cape, 1/3 acre., att. gar., five appli., w/w. patio, xtras, low $30s. 698-4153.

BUNGALOW: Ferndale, N. Y., in bungalow colony, 2 bdrmms., full bath & kitch., furnish., screen porch., all utilities, 40x100, priv. lake, PY 6-3887 after 6 p.m.

HOUSE: Three bedrm., liv. rm., utility rm., fin. basemt., 2 zone heat, w/w, s/s, patio, ohw, att. gar., fenced, 18 ft. above grnd. pool w/deck, 80x100, low 30s. MO 9-2892.

AUSTIN AMERICA: '70, 32,000 mi., new Pirelli tires, Lucas batt., ask. $1,100. 751-0279.

HOUSE: Setauket, 3 bedrm. ranch, liv. rm., din. rm., eat-in kitch, lg. fam. rm. w/firepl., full basemt., 2 car gar, all appli., 2 baths, s/s, w/w, 1/3 acre wooded, ask. $46,000. 751-2179.

FIAT: '69 850 conv., yellow w/blk. tp., 23,000 mi., over 25 mpg., new brks., $900. 586-6004.

STEREO CHANGER: Garrard auto. record changer, 4 spd., $18. 928-1043.

HOUSE: Farmingdale area, 1 story, 3 bedrms. 249-7632.

HONDA: 350 cyl., '72, extras, $675. 935-2711.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

RALPH A. BIFALCO of Hull Assembly, Plant 36, died April 12 at the age of 50. He had been with Grumman since 1964 and lived at 68 Cliff Drive, Hicksville.

FRANK LICARI of Configuration/Data Management, Plant 15, died April 13 at the age of 43. He had been with Grumman since 1964 and lived at 218 Raider Street, North Babylon.

ERNEST PERINETTI of Machined Parts-Raw Material, Plant 3, died April 19 at the age of 60. He had been with the Company 28 years, and lived at 30 Sherman Rd., Farmingdale.

Plane News extends its apologies to the family and friends of the late Edward J. Gobrick for typographical errors which appeared in the obituary column in the April 13 issue. Ed Gobrick, who was an electronics inspector in Plant 5, died March 27 at the age of 57. He had been with the Company since 1949.

For Sale

MISC.: Decorator sink, wh. marble shell-shaped tp., red cap. base, never used, $75; Ladies gold velvet rocker, $50; Fr. prov. edison white/gold trim chest on chest w/match. crib, $100; Shag rug, 9x12, yellow, wrapped, cleaned, $60; Modern hutch, $65. 334-0735.

AMPLIFIER: Kustom 200, watt amp., w/3 12 in. spkrs., blue padd. head and bott., lifetime warranty, $350. 598-2412.

HOUSE: W. Sayville, hi-ranch, ¼ acre, 3 bedrms., eat-in kitch., din. rm., liv. rm., 27 ft. rec. rm., lf. sundeck, 20x40 patio, 1½ baths, 2 car gar., s/s, w/w, wash/dryer, dishwasher, etc. $34,500. 567-1193.

PONTIAC: '65 Catalina. 2 dr. hdtp., auto. p/s,p/b, $450. AN 1-7391.

CHEVY VAN: '73 Camper, full warranty, pop top, V8 eng., auto., radio, 1 ton chassis, stove, refrig., 17,000 btu heater, 35 lb. propane tank, press. water, toilet, ¾ in. plywood cabinets, sleeps 4-5, $6,950. 212-961-1250.

HOUSE: Levittown, expanded ranch, 3-4 bedrms., enlarged kitch., firepl., 1½ baths, w/w, new roof, carport w/storage area, appli, many extras, $34,-000. PY 6-6920.

COTS: Alum. canvas, cots ltwt., folding, bunk-style or side-by-side, set of 2, $20. 864-1436.

MUSTANG: '66, 6 cyl., auto. trans., 2 dr., dk. grn., $450. 261-1033.

GUITAR: Hagstrom III, solid body, blk. 3 pick-ups, hard case, good condition, $90. 698-4485. after 6 p.m.

PONTIAC: '63 Catalina, 44,000 mi., 2 new tires, batt., shks., $230. 567-1145.

HOUSE: Deer Park, split ranch, 8 rms., 1½ baths, new country kitch., central a/a, alum. front, chain link fence, w/w, low taxes, 667-5599 before 5 pm.

TEMPEST: '66 Custom, 326 V8 eng., auto. trans., 58,000 mi., newly painted, new tires & 2 snows, new batt., exhaust system, 333-7849, after 4 p.m.

SUBARU: '70, front wheel drive, 30 mpg, 90 hp, radio, 2 snows, $950. HA 7-8924.

IMPALA: '65 conv., 283 cu. in. eng., good rubber/brks., $125. 842-3369 after 5:30 p.m.

TIRES: Uniroyal snow studded, w/w, 5,000 mi., $65. 938-6140.

FURNITURE: Liv. rm. set, dinette set, 2 bedrm. sets, refrig., stereo console w/tv, am/fm, & record player. 864-3709.

MISC.: Toro pwr. handle w/21 in. reel power; combination wood lathe, jig saw, tbl. saw, grinder, $25 ea. 543-3221.

FISH TANK: 30 gal., motorized filter, many extras, $40 AN 5-0297.

CHEVY: '72 El Camino, 307 V8, turbo, vinyl tp., rally wheels, p/s, airshocks, w/w. 289-2887.

BOY'S SUITS: Two med-blue, sizes 10 and 14, $20 ea. CH 9-1019.

MISC.: Maple chest of drawers, $30; Polaroid 210 w/flash, $30; meat slicer, $10; standard size crib, $10; four childrens golf clubs, #2, 5, 10 and driver, $20; lawn mower, $25; Motorola 8 trk. tape deck, 2 spkrs., $50; Corvair '61, $20. TN 8-7224.

BABY FURNITURE: Carriage built-rite, Park Ave. model, $50; playpen, 40x40 nylon net folding type, $20; baby tender feeding tbl., $20. 431-5716.

BOAT: '72 Chris Craft Lancer, 19 ft., 200 hp, inboard-outboard, fully equipped, ask. $5,200. OR 1-3235.

PONTIAC: '65 Tempest conv., 6 cyl. auto., r/h, newtp., nds. touch-up paint job, $350. 588-4140.

BOAT: Wager, 15 ft., fbgl. hull, Mastercrft. trail., 18 hp. Johnston motor, $325. LI 1-1257.

SAILBOAT: Lightning 9932, 19 ft. sloop, fbgl., teak trim, self-bailing, full set racing sails, trail, access., 367-4234.

MOTORS: For all American motors, six cyl. eng., Vipak headers, $50; Clifford 4 barr. mainfold, $30. JU 6-9525.

BIKES: Stingrays, Schwinn, girls, $35; boy's $30. PE 5-3476.

FIREBIRD: '68, 400 conv., bucket seats, center console, auto. trans., p/s, wide sport tires, 400 cu. in. 4661 V8 eng., low mi., ask. $1,500. 543-4786.

HOUSE: Selden, 3 bedrms., 1½ baths, panel den, w/w, fenced, appli., half basemt., lndspd., $29,500. 732-5954 after 6 p.m.

TV: Admiral 23 in., b/w console, $50; Tires, F78x15 w/w, 2 mnt. on Rambler wheels, $35; 775x15 snows on Rambler wheels, $15. St. Bernard puppies, $100 to $150. MA 6-2825.

STOVE: Magic Chef, gas, 36 in., $20. 271-4312.

VACUUM CLEANER: Sunbeam, $25. 667-0495.

For Sale

HOUSE: Wantagh, school distr. 23, 3 bedrm. ranch, fin. basemt., heated work rm., spare rm., 1½ baths, 1½ car gar., nr. shps., $39,500. 826-2779.

PONTIAC: '67 2+2 conv., 428 hi-performance eng., 4 spd., posi-tract. rr., w/xtras, $950. 698-0143.

PING-PONG TBL.: Regulation size, brand new, $25. 541-7135.

IMPALA: '61, 6 cyl. std. trans., $125. CH 9-5277.

IMPALA: '61 V8 eng., $75. 938-4638.

FORD STATION WAGON: '60, orig. owner, 70,000 mi., $150. WE 5-6948.

MISC.: Prom gown, size 6-7, blue w/wht. lace trim, sheer long sleevs, $20; Color TV, Admiral, 21 in., nds. yoke, $50; RCA stereo, am/fm, 120 watt amp., 6 spkers., 5 ft. ong modern walnut cab., $100. 581-8527 after 4 p.m.

CHRYSLER: '69 Imperial, new tires, full pwr., a/c, stere tape deck, $2,500. 538-3637.

FENCE: Three rail post/rail, approx. 110 ft. w/ gate, 5 yrs. old, treated, ask. $65. 586-6004.

BOAT: 17 ft. Pennyan, 40 hp Johnson electr. start, trailer, nds. paint, 2 gas tanks, cushions, etc., $550. 724-4687.

CORVAIR: '66, 36,000 mi., Monza 2 dr., polygl. tires, muffl. shks. brks., new last 8 mos., nds. minor body wk., $350. HA 7-3441 after 6 p.m.

GALAXIE: '65 500, hdtp., conv., 352 cu. in., auto. trans., pwr. steer., $450. TU 8-5177 after 4:30 p.m.

JACOBSEN: Commercial edge-r-trim model 321, used once, $100. 798-2786.

TRAILER: ACE travel trail., 16 ft., sleeps 6, shower, toilet, heater, range, oven, hot water, gas and electr. refrig., $2,295. 433-9095.

BOAT: Chrysler charger, 16 ft. fbgl., 55 hp. electr. start, outbd., (both '69),; '72 trailer, water ski outfit, many xtras, $1,495. 427-2680.

COUGAR: '69 Mercury, 2 dr. hdtp., auto., bucket seat, console, naby blue, white vinyl top, chr. mag wheels, (2) rr. spkrs., wired for tape deck, sacrifice, $1,995. 921-0163.

MISC.: Pool tbl., regulation, 4x8, $35; Ping pong tbl. ¾ in. plywd., $20; Lullaby crb. $15. R. Goddard, Ext. 7850.

HOUSE: Bayville, split- level ranch, 5 yrs. old, 4 bedrms, 3 bath, 2 car gar., avail. immediately, $52,000. 628-1595 after 6 p.m.

BOAT: Lapstrake cabin, 20 ft., 85 hp., compass, auto. bilge pump, sleeps 2, ice box, sink, winter cover, wet/dry box, mooring and dinghy, ready for ater, $1,800. 724-0026.

HOUSE: E. Setauket, 2 yrs., custom colonial, 4 bedrms., 2½ baths, liv. rm., formal din. rm., den w/firepl., 2 car gar., basemt., carpet, $40,000. 928-3796.

MISC.: Shop manuals for Ford Bronco. BA 3-1214.

OUTBD.: '62 40 hp. Johnson, fully electr., all controls/dials w/tank, 293-7796.

BOAT: '72 fbgl. Reinell, 16 ft., '72 50 hp. Mercury elect., 20 hrs., navy top, curtains, winter cover, fully equip., $2,150. MO 5-6688.

MISC.: 8 ft. fbgl. Pay Yan Dink plus sail rig, $125; VW tp. carrier, $10; VW frame trailer, hitch, $15; sedan tp. carrier, $10; water bike. holds 90 lbs., $25; Mini-bike 4 hp, 2 spd., $125. AT 6-2289.

TIRES: L78x15 Firestone, w/w fblg., belted. one never used, one half worn, both for $40. 261-7831.

TV: Portable, b/w, 15 in., uhf/vhf, walnut cabinet, instant-on, light weight model, $55. 354-7986.

BOAT: Islander '67, 22 ft., fbgl., deep V hull, 150 hp inbd/outbd., fresh water cooled, new power tilt motor, batt., manifolds, stern drive units, about 50 hrs. on motor, ask. $3,300. MO 9-5981 after 5 p.m.

HOUSE: N. Massapequa, 4 bedrm. colonial split, new kitch., new carpeting, alum. siding, fenced in yd., lg. den, dead end sreet, $42,500. B. Pfaltz, Ext. 87167.

HOUSE: Huntington, Northport schl. distr., 4 bedrm., brick cape, liv. rm., din. rm., 2 bath, mod. kitch., ohw, s/s, bsmt., trees, lndscpd, patio, fenced, June occup., $39,990. 757-2557.

BOAT: '65 Silverline runabout, 16 ft., mgbl., 40 hp '66 Johnson, full controls, wrap-around windshield, elec. start, (2) six gal. tanks, 2 lounge seats, w winter covers, anchor, lines, two paddles, extras, firm $550. CH 9-2663.

MISC.: Parts for 318 Plymouth or Dodge, torquelites, converters, 4.56 posi-rear for Dodge-Ply, rebuilt powerglide. 212-347-6516.

MISC.: F78x15 Goodyear tire; Two 15 in. rims, 5 lugs; Two adjust. bed frames; reasonable offers. 735-5261.

For Sale

MISC.: Holley 715 CFM Carburetor, Mr. Gasket dual pt. distrib./Acell hi-perform. coil for '70 and up 351 Cleveland Ford, like new, $60. IV 1-0825.

BOAT: Luhrs/Ulrichsen, 28 ft., sportsfisherman, loaded, compl. turn-key boat. 277-9622 evgs.

PROPERTY: Business plot, 50 ft. x 200 ft., Shirley, plan of Tangier Sec. A, block 44, lots S ½ of 18, $4,990. 938-6140.

HOUSE: Strathmore Eaton, col. fin. bsmmt., 6 bdrm., 3 zones o.h.w., fireplace, 6 appl., w/w, sewers, 2 car gar., formal dng. rm., fam. rm., extras, $44,900. 928-3421.

HOUSE: Cocoa, Florida, 5 rms., 1 bath, 2 car gar., zone for duplex, 50 ft. x 118 ft. Tony, Ext. 2858.

HOUSE: Wantagh Woods, 4 bdrms., eat-in-kit., oversize gar., fin. bsmt., appl., w/w, fenced, $970 taxes, $36,500. 221-0107.

HOUSE: Smithtown, col., 6½ yr. old, 3 bdrm., 1½ bath, den, formal dng. rm., eat-in-kit., mod. elec. kit. appl., o.h.w., ¼ acre, near schools & shopping, $41,500. 724-2756.

HOUSE: East Brentwood, 3 bdrm., ranch, mod. eat-in-kit., pan. bdrm. (2), bath, w/w, s/s, fin. bsmt., gar., enclosed patio, 75 ft. x 100 ft., fenced plot, appliances, $29,500. 273-7330.

MOTOR HOME: '71 Winnebago, 22 ft., sleeps 8, 2 air. cond., $8,900. AR 1-3031.

DINGHY: 7 ft. Moby Dink, used once, compl. w/ oars, oarlcks, utbd. transm munt, $65. WA 1-4686.

SAILBOAT: 19 ft. Lightning, glued seams Hoernke built, 2 suits Sobstab sails & spinnaker, teak floorboards, custom trailer, $750. 734-7311.

OUTBOARD MOTOR: 10 hp, '69 Evinrude w/tank, $270. 265-1187.

BOAT: Cape Cod Bullseye, 16 ft. fbgls, keel, day sailer w/cutty cabin, eng., sails, $1,500. 265-4664.

HONDA: '70, 350 cc, 3,000 mi., extras, $575. 935-9668.

TRAIL BIKE: '65 Ducati, $150; '71 Honda, $175; '67 21 ft. Grady white, 80 hp Johnson, '73 Trailer, extras, $2,300. 473-6187.

OUTBD. MOTOR: '63, 10 hp Johnson, 6 gal, gas can, $60. 842-9051.

MOTOR CYCLE: '71 BSA 500CC, low mileage, $700. Evgs. 281-5226/286-9675.

MOTOR CYCLE: '65 Hodaka, 100CC, exp. chamber for on-off road, $225; '66 Honda CB160 direct sigs & rack, elec. start, $250. PY 8-4258.

MISC. FURN.: Heywood Wakefield blond mahog. bdrm. set: dresser, mirror, chest, night stand, $90; Sony auto TV antenna, $12. PY 8-4258.

HONDA: '71 CB350, low. mileage, $725. FR 8-1559.

LADDER: 24 ft. wooden, $25. PR 5-1941.

Personal

In sympathy for Mrs. Recella McNeel, Plant 1, whose niece Sandra Thompson, age nine, was burned to death on April 12, the employees of Plant 1 are collecting money for a memorial fund. Anyone wishing to contribute to this fund please contact Madeline Deyns, coordinator, Ext. 87401 or 87402.

plane GRUMMAN news

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Expect 'new look' of F-14 team to speed delivery of Tomcats

During the past several months there's been a quiet but highly significant change in the way things are being done at Calverton's Plant 7—a change that emphasizes moving production F-14s out and over the fence more quickly without at all compromising quality.

"We're using a different system, one that's closely akin to the methods that proved so successful in the LM (Lunar Module) program," comments Charlie Brown, who figuratively wears two hats: one as assistant chief test pilot for F-14 production aircraft, the other as F-14 production acceptance manager at Plant 7.

Probably the simplest way of describing the "new look" is to say that now there is a production team made up of a representative from Manufacturing, Engineering, Production Control, Industrial Engineering (for planning), Product Support, and Flight Acceptance—*plus* one team leader for each production aircraft. The team itself is located in an Operations Control Center on the shop floor so as to provide centralized, coordinated, three-shift coverage.

Each team member has a crucial function to perform. The Manufacturing member of the team time-lines each work schedule according to skill-mix requirements, the Production Control man supplies parts and components needed to meet the job schedule, and the Product Support person makes sure that equipment is available when required, and so on. Each has his area of expertise, each his corresponding responsibility. For example, as Brown points out, each aircraft has a "personality" of its own; and the team leader, more than anyone else, knows that personality in depth.

"Because he has that detailed knowledge—crabs, open items, work that's in process, and so on—he, in conjunction with the IE on duty, writes out the daily work schedule. And he writes it in detail.

"The job of providing daily positive control of work-flow is accomplished by the Control Center team. Status boards are maintained in the Center so that up-to-date information can be tracked easily for each production plane."

Illustrates status

A glance down a status board illustrates what Brown and his immediate three associates — Production Test Pilot Tom Gwinne and Production Weapon System Operators Paul Merana and Al Beck—are concerned with. The open items on one aircraft one day included: "Glare shield cracked;" "Right engine no start (2GR-1 MDF-1);" "Canopy handles out of rig (GR-1 MDF-2;" "Hydraulic oil lower R/H speed brake door (AF 161);" "Weapons preflight;" "Ground run crabs: MDF 1 forward boarding step hangs up when opening; MDF 2 stand-by compass-cover plate missing; MDF 3 canopy close light stays on with canopy closed," and so on.

To the right, on each item, is a date and the shift when the work is to be done—day, night, graveyard. And once the work has been completed, it's noted on the status board so there is continuing up-dating. The work tasks themselves are handled by Manufacturing. And the team leaders, plane captains, and Control Center crew—in fact, just about anyone who wants to take a look—know how things stand.

"So all bets are covered, anytime, around the clock," says Brown. And he smiles and adds, "At least they should be."

He also points out something quite significant:

"For all of us who are familiar with what goes on in the shop, how planes are built, and some of the oddities of flying, it's a kind of thing we don't think of. It's just part of the work, something natural. But for the person outside who isn't familiar with the ins-and-outs of aircraft production and test flying, it has to be understood that a 'deficiency' or a 'crab' is not necessarily a previous fault—something that's shown up all along in the production flow. It can be what we were talking about earlier: the personality of the aircraft. On one particular plane a door doesn't fit right, even though all were built in the same way.

"In other words, the problem is not a deficiency but simply a fix. You find that when you drive a car, we find it when we fly an aircraft, and that's all there is to it. The point is, this list of open items or crabs may seem long, but it usually isn't a sign of a poor aircraft, either in design or manufacture."

In any event, the reason for a production test flight is to learn how everything plays together; and the only way to assess that is to fly the bird. And of course, as a plane matures there are fewer and fewer crabs, and production flows more smoothly. Most importantly, fewer production flights are needed prior to Navy acceptance flights. And that's the real test: delivering Tomcats to the Fleet rapidly.

Plane huddle. Lt. Cdr. Don Sharer (L) and Tom Gillen (R), F-14 flight test manager, huddle with Charles Brown, F-14 production acceptance manager, as they keep tabs on Tomcat progress at Plant 7 to assure timely delivery of planes. (Photo by Gerry Costello)

milestones

(Continued from page 8)

Frank R. Elliot, Proj. Engg., Veh-Tech. (25)
Anthony Minutella, Major Assy. (27)
Ernest P. Braun, Fuselage Joining (27)
Salvatore A. LoDolce, Maint.-Rearrangement (27)
Charles P. Estabrook Jr., Equip. Eng-Equip/Sel./Des Engg. (30)
George F. Collins, Reproduction Services (30)
Paul J. Marcone, P/S Electro Mech. Des. Engg. (34)
William J. Evans, Aerosynamics Staff (35)
Hyman R. Garnet, Materials & Struct Mech. (35)
Guiseppe R. Avellone, Aerophysics (35)
Harold L. Martin, Project Administration (35)
Gertrude A. Haugwitz, Dept. Secretarial Service (35)
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Daniel C. Postupack, Prog. Mgt. Marine (36)
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E. Pfeffer

G. S. Furlong

A. Charnay

P. Logue

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